

What is claimed is:

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1. A method of automated defect localization in the testing of semiconductor integrated circuits, comprising the steps of:
testing the integrated circuits to obtain generalized failure data;
inputting the generalized failure data to a circuit analysis tool;
obtaining from the circuit analysis first localized probable defect data;
performing in-line inspection of the integrated circuits to obtain second localized probable defect data; and
correlating the first and second localized probable defect data.

2. The method of Claim 1, wherein the steps of inputting the generalized failure data to a circuit analysis tool and obtaining from the circuit analysis first localized probable defect data are performed ~~substantially~~ continuously using at least one programmed computer. ^{tool}

3. The method of Claim 1, wherein correlating the first and second localized probable defect data comprises producing a visual overlay of the first and second localized probable defect data.

4. The method of Claim 1, wherein the integrated circuits are logic circuits ^{having} ~~have~~ built-in self-test capabilities.

5. The method of Claim 1, wherein the generalized failure data is obtained using end-of-line testing of the integrated circuits.

6. The method of Claim 5, wherein the integrated circuits are tested in wafer form.

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7. The method of Claim 1, wherein obtaining from the circuit analysis ~~tool~~ / first localized probable defect data comprises:

creating a database against which the logic defect data is processed to obtain physical defect data; and
processing the logical defect data against the database to obtain physical defect data.

8. The method of Claim 7, wherein creating the database comprises translating design information from a first format to a second format.

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9. A system for testing semiconductor integrated circuits, comprising:
a circuit analysis tool; and
means for automatically:
applying to the circuit analysis tool generalized failure data;
obtaining from the circuit analysis tool localized probable defect data;
representing the localized probable defect data in a standard format;
and
storing the localized probable defect data on a database server accessible to multiple client machines.

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